



Robert Hannigan, director of UK's Government Communications Headquarters, gives a talk on encryption at the Media Lab Monday.

ROBERT RUSCH—THE TECH

# Platform may lower barrier to getting help

MIT-specific service, based on '7 Cups of Tea,' is backed by Mental Health

Divya Gopinath  
STAFF WRITER

Peer2Peer, an anonymous web-based peer support platform, launched late last month. The site allows users to chat with fellow students; the Institute launched the site as part of an ongoing effort to lower the barrier for seeking help with mental health issues. Peer2Peer was spearheaded by Berj Chilingirian '16 and two professionals at MIT Mental Health, Evan Waldheter and Rheinila Fernandes. Peer2Peer builds on another emotional health and well-being service, 7 Cups of Tea, which contacted Mental Health last spring offering to develop an adaptation of their chat system for the Institute. Peer2Peer is now one of two major Institute-affiliated peer support networks. The other, Peer Ears, focuses on in-person support. Peer2Peer also supplements a larger campus-wide mental health

initiative, joining the ranks of other peer support platforms like Lean On Me, another anonymous service with which students communicate by text message. Lean On Me, unlike Peer2Peer, is not affiliated with the Institute. Addressing the differences between Lean On Me and Peer2Peer, Waldheter highlighted Peer2Peer's additional features inherited from 7 Cups of Tea. "Peer2Peer offers one-on-one chat, like Lean On Me, but also allows users to join informal support groups, and take advantage of existing 7 Cups of Tea infrastructure such as online tools for general wellness, stress reduction, anxiety management, and overall mental health promotion." "LeanOnMe has no affiliation with MIT," Chilingirian added. "I also think Peer2Peer will be used differently from LeanOnMe by vir-

Peer2Peer, Page 10

## IN SHORT

Nominations for the Teaching with Digital Technology award are due Monday, March 14. Make nominations at [nominateMyProf.mit.edu](#).

Student Registration for the Spring Career Fair will begin Wednesday, March 16.

Applications for supervisor-sponsored, for-credit, or volunteer UROPs are due Thursday, March 17.

DormCon will meet Thursday, March 17 at 7:30 p.m. in Baker House. Meetings are open to all dorm residents.

Send news and tips to [news@tech.mit.edu](#).

# Lagarde touts 'game changers' to address demographic shift

First female IMF Managing Director to engineers: 'use innovation in order to reduce public spending'

Drew Bent  
FEATURES EDITOR

Christine Lagarde, the managing director of the International Monetary Fund, spoke at MIT last Friday, saying "we need to reframe the debate about demographics" and the global challenges that come with demographic changes. Her plan to counter shrinking and ageing populations in advanced economies includes both policy-driven approaches, such as entitlement reform, as well as calls for technological innovation in healthcare and energy. Lagarde suggested raising retirement ages and using immigration to increase national workforces, although she qualified her immigration statement with the "big, big caveat" that workers must be integrated into the communities they're entering. Lagarde said that the IMF and MIT have a similar culture of "rolling up one's sleeves and tackling problems hands-on in the lab, in the start-ups, in the offices, and whenever we give advice to poli-

cymakers." Although the IMF has no motto, she said it could be the same as MIT's "Mens et Manus." Since the 1940s, the IMF has provided loans and financial advice to developing and developed nations as part of a fund that is now worth hundreds of billions of dollars. After visiting the MIT Media Lab earlier in the day, Lagarde told *The Tech* in an interview that she hopes she can "explore some alternative ways to manage knowledge" with researchers and "turn that knowledge into stories that will actually speak to policymakers." One of the things she suggested for a hypothetical engineer trying to help tackle demographic problems was "to use innovation in order to reduce public spending." For health care, that includes "identifying and targeting the therapy that will be most efficient and where money will be best spent," she said. "Innovation applied to clean energy, renewable energy is absolutely vital," she added.

Lagarde became the first female director of the IMF in 2011, and was appointed to a second five-year term just last month. Her first term began during the European debt crisis, and now she is faced with the additional challenges of Europe's influx of refugees and China's slowing growth. Her biggest takeaway from her tenure was "nothing happens without a team." "And when I say that, it's the team of those who work with you, but it's also the relationship that you build across the membership," she said. "We have 188 countries in the membership, and we have to — I have to — be mindful of all of them. There is no small country, large country. They're all members, and they all deserve ... the same degree of care and attention." "We will only have traction if we care, if we listen, and if we provide the best service," she said. Lagarde's talk on campus, titled "Demographic Change and Eco-

Lagarde, Page 10

## Protesters seek release of Aafia Siddiqui

A small crowd of protesters gathered at the bottom of the steps of Lobby 7 Tuesday afternoon. They called on the U.S. government to release and repatriate Aafia Siddiqui '95, a Pakistani neuroscientist who is currently serving an 86-year sentence in a prison in Fort Worth, Texas. Siddiqui is a graduate of MIT, class of 1995, and received her PhD in neuroscience at Brandeis University. She had been wanted for questioning by the FBI in relation to ties to Al-Qaeda and terrorist bomb plots, and in 2010 was convicted of assault against American army person-

nel after she was questioned in Afghanistan. Siddiqui, her family, Pakistani news media, and many activists in both the U.S. and the Middle East have denied the charges against her and have accused American authorities of subjecting her to torture. A diverse group of people, young and old, Muslim and non-Muslim, joined in the protest. Signs proclaiming their demands waved in the air and hung down their backs as they listened to a succession of speeches about Siddiqui and broader concerns with U.S. government actions. Chants of "Free Dr. Aafia! Send

her home now!" and "USA, CIA, Free Dr. Siddiqui!" punctuated the speeches. One speaker was Abdullah Faaruq, the imam at the Mosque for the Praising of Allah in Roxbury, MA. According the organizer who introduced him, Faaruq knew Aafia when she was a student at MIT and that he "had a pretty close relationship with Aafia and her family." Speaking on more general issues was PF Soto, an activist based in Cambridge. In her speech, she condemned "so-called activist groups" who "are infiltrated, tamp down on people's outrage ... [and] condescend to the average person who [she] believe[s] can handle the truth." These groups, Soto said, should be educating the people, and, like her, "holding documentary film screenings on everything" that MSM, or mass mainstream media, "doesn't want us to know about." Perhaps referring to Siddiqui's case, Soto called the American election system "complicit [with] a rotten system that is leveling the earth and torturing and killing a massive portion of the human beings that we share the planet with." She hopes that "things will change with awareness." A little off to the side, a group of smiling children posed for a picture. In their hands were hand-made, heart-shaped posters proclaiming in Sharpie, "I love Aafia."

— Vivian Zhong



LENNY MARTINEZ—THE TECH

A young girl passes out papers about Aafia Siddiqui, an MIT alumna currently serving an 86-year sentence in Fort Worth, Texas, during a rally for Siddiqui's release held Tuesday on the steps outside 77 Mass Ave.

**HAPPY BIRTHDAY, RANDOM!**  
Ever wonder how you throw a party for a dorm? **CAMPUS LIFE**, p. 6

**WHY SHE CHOSE MIT**  
Hint: it wasn't the dead grass on Kresge Oval. **CAMPUS LIFE**, p. 6  
**CROSSWORD**  
Finally. **FUN**, p. 5



**SHAKIRA IS IN IT**  
Read our four-star review of Disney's newest animated film, *Zootopia*. **ARTS**, p. 15

**WE CAN DO BETTER**  
Grad student has not-so-fond memories of GIRs. **OPINION**, p. 4

**SECTIONS**  
Opinion .....4  
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WEATHER

# Sunny weekend to follow rainy Thursday

Colin Thackray  
METEOROLOGIST

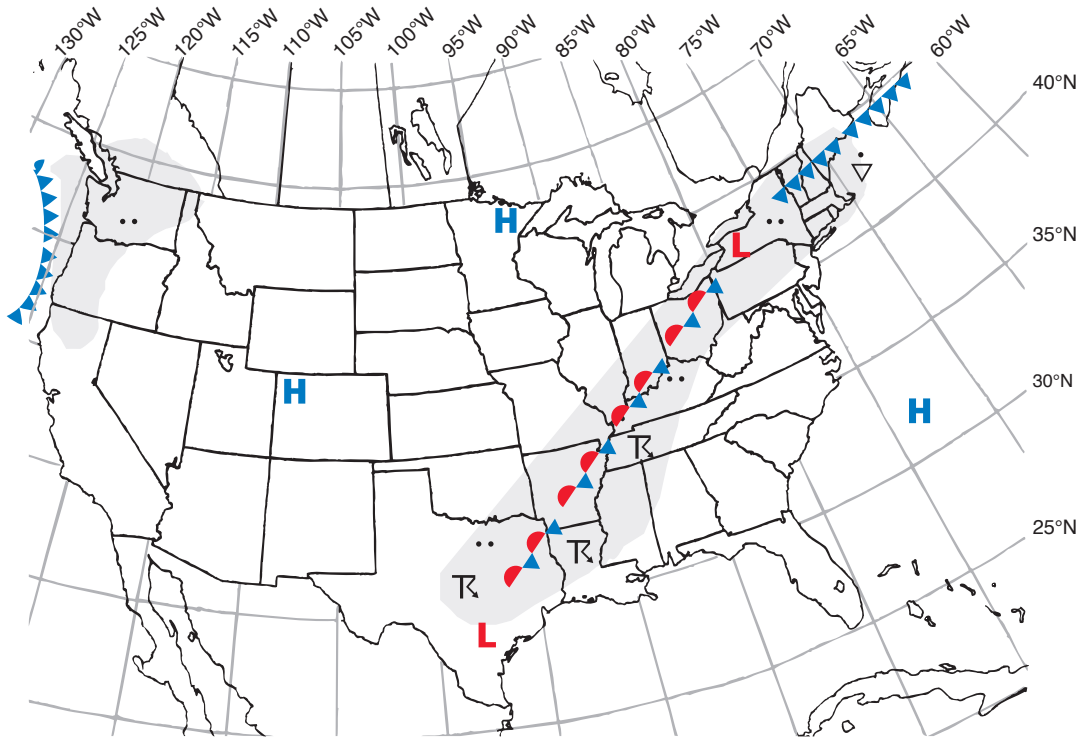
It will likely be rainy for the rest of the day and night into Friday morning as a low pressure system passes to the north. The trailing rain will give way to high pressure for the rest of the weekend, leading to clear skies and sunny days on Saturday and Sunday. While it won't be quite as warm as Wednesday of this week, it will be very springlike for those planning outdoor weekend activities.

With the warm weath-

er coming, is our mostly snow-free winter over? On average, Boston only gets two snowfalls of more than an inch in the month of March, and less than one in April. Statistically, after the first week of March the snow has disappeared and is very unlikely to come back. So it's probably safe to pack away some winter gear, but before you start thinking about dusting off the summer wear, keep in mind that in an average year we usually only get a handful of days with highs above 70°F before May.

Extended Forecast

**Today:** High of 65°F, winds 5-10mph W, rain in the afternoon and evening.  
**Tonight:** Low of 45°F, winds 5-10mph NW, rain.  
**Tomorrow:** High of 57°F. Overnight low of 32°F, winds NW 10-15mph. Clearing.  
**Saturday:** High of 65°F. Low of 45°F overnight, winds SW 5-15mph. Clear.  
**Sunday:** High of 60°F, winds 5-10mph. Mostly clear.



Situation for Noon Eastern Time, Thursday, March 10, 2016

Weather Systems	Weather Fronts	Precipitation Symbols	Other Symbols
<b>H</b> High Pressure	Trough	Snow	Fog
<b>L</b> Low Pressure	Warm Front	Rain	Thunderstorm
Hurricane	Cold Front	Light	Haze
	Stationary Front	Moderate	
		Heavy	

Compiled by MIT Meteorology Staff and The Tech

**Solution to Saturday**  
from page 5

M	A	N	I	F	E	S	T	H	A	V	E	N	S
E	M	I	N	E	N	C	E	O	C	E	L	O	T
T	A	K	E	H	A	T	T	E	L	L	M	E	
E	N	E	C	A	R	E	S	S	V	E	E	P	
D	A	S	C	H	L	E	L	A	C	E			
	R	E	O		F	A	U	S	T	I	A	N	
D	E	K	E	D		C	O	N	C	I	E	R	G
A	C	I	D		S	U	R	G	E		L	I	E
S	H	R	I	N	K	R	A	Y		T	V	S	E
H	O	S	T		C	I	T	Y		P	H	I	
		L	O	T	S		C	R	I	S	P	E	R
D	E	M	I		T	Y	C	O	O	N		E	R
A	L	U	M	N	I		A	S	P	I	R	A	N
R	E	L	I	E	S		M	M	E	C	U	R	I
K	V	E	T	C	H		S	O	R	E	E	Y	E

**Solution to Steaks**  
from page 5

9	7	2	5	4	8	3	1	6
6	5	8	2	3	1	4	9	7
4	3	1	7	6	9	5	8	2
7	4	3	1	2	6	8	5	9
2	8	9	4	5	7	1	6	3
5	1	6	9	8	3	2	7	4
1	6	4	8	7	2	9	3	5
3	9	5	6	1	4	7	2	8
8	2	7	3	9	5	6	4	1

**Solution to University**  
from page 5

6	9	2	3	5	8	1	7	4
5	3	4	1	7	9	2	8	6
7	1	8	4	6	2	9	3	5
1	8	3	9	4	5	6	2	7
9	2	5	7	3	6	4	1	8
4	7	6	8	2	1	5	9	3
2	5	7	6	9	3	8	4	1
3	6	1	2	8	4	7	5	9
8	4	9	5	1	7	3	6	2

**Solution to Tower**  
from page 5

4	3	1	6	5	2
5	4	2	1	6	3
3	2	6	5	4	1
6	5	3	2	1	4
1	6	4	3	2	5
2	1	5	4	3	6

**Solution to Airlines**  
from page 5

5	4	2	3	6	1
1	6	4	5	2	3
3	2	6	1	4	5
4	3	1	2	5	6
2	1	5	6	3	4
6	5	3	4	1	2

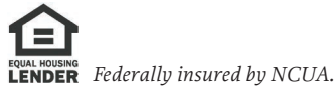
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Solution to Hands...  
from page 13

8	6	2	4	1	9	3	7	5
7	5	1	3	9	8	2	6	4
1	8	4	6	3	2	5	9	7
6	4	9	2	8	7	1	5	3
2	9	5	7	4	3	6	1	8
5	3	8	1	7	6	9	4	2
3	1	6	8	5	4	7	2	9
4	2	7	9	6	5	8	3	1
9	7	3	5	2	1	4	8	6

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Game on Roberts Sat 4:45  
Post Game Pizza @MacGregor Sat 7





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# Mens et ... mens?

## Rethinking the freshman year science core

The very first class I attended at MIT was 7.012, four and a half years ago in the fall of 2011. I remember how excited my fellow freshmen felt in Maseeh dining that morning, how tightly the Infinite was packed with students finding new classrooms, and how crowded 26-100 was once my friends and I got there. But looking back on that first class, I cannot actually recall much of what the professor said. Or really much from any other 7.012 lecture. Or from 18.02 lectures that fall or 5.111 lectures the following spring. Why is that? I have a fairly good memory, and in four years it shouldn't seem reasonable for me to forget the material. I suspect that I don't remember what was taught in these three classes because all of them were rigid lecture-based classes. Although these were core freshman science classes, there was little to no student engagement through hands-on learning.

These classes — 7.012, 5.111, and 18.02 — are effective in teaching freshmen *how* to do college: how to work with peers, take notes in lectures, ask for help in office hours, turn in pssets by the deadline, and manage one's time while learning to live without one's parents. These are invaluable lessons, but does learning these skills mean that I can't also learn material I would remember a couple years later? I remember that I finished freshman year disheartened, feeling that I had spent a whole year at MIT without really growing my appreciation for biology, chemistry, or math.

What astonishes, frustrates, and disappoints me about MIT's freshman science core is the fact that there is no lab component to 5.111. I learned and retained more information in high school AP Chemis-

try than in 5.111. To draw a comparison, my high school found the resources for each student to perform multiple lab experiments each week. I'll never forget the weeks of anticipation leading up to the Sodium Trashcan Experiment in which we dropped a 30g chunk of sodium into a trashcan filled with water. We all stood on the soccer field and watched the lid soar over 300 feet into the air as an explosion boomed throughout the whole campus. In addition to blowing the lid off the trashcan, we made predictions, took measurements, and carried out calculations to understand the heat transfer that occurred. It's these kinds of experiences that explain why I remember almost everything I learned in high school chemistry.

When I visited my high school chemistry teacher after freshman year at MIT, he asked me about my chemistry labs. He was stunned to learn that a college would choose not to have a lab component in their Chemistry 101 equivalent — especially MIT, supposedly the bar-setter for innovation in science and learning. There are countless exciting and engaging ways for students to experience the world of chemistry; why don't new MIT students see them first-hand? Why don't MIT freshmen have hands-on experiences in chemistry, biology, and calculus?

I'm glad to hear that 3.091 has recently become much more hands-on, but I can't comment on it from experience. And, of course, there's TEAL. It's funny that while TEAL seemed to top the list of "Most Complained About Things" during freshman year, the material taught in 8.01 and 8.02 is what I actually remember best from the technical GIRs. I can still visualize how a magnetic field might act in different situations and remember how to set up a Gauss's

Law problem. As much as students gripe about TEAL, I would bet 8.01 and 8.02 are more ingrained in most recent graduates' minds than 5.111 and 7.012. So why aren't these other departments experimenting with their introductory teaching methods the way that physics has? When MIT's motto is *mens et manus*, why are the core freshman science classes all mind and no hand?

While MIT is dedicated to pushing boundaries, certain boundaries here are not yet being pushed. The freshman science core is an example. These core classes are critical in an MIT education, especially because they are directed toward freshmen that may be searching for their calling in science. As the first academic experiences that MIT students go through, shouldn't these classes serve as stellar examples of the innovative, forward-thinking, hands-on place that MIT strives to be? Shouldn't they be setting the bar for what introductory science classes around the world should be like?

Current and former students: I encourage you to ask yourselves these questions and voice your thoughts and concerns. In early February, President Reif sent an email to the MIT community about “MIT and the future of education.” Right now is the perfect time for all of us, especially students, to start thinking about the future of the freshman science core, the end goals for these classes, and the link between the teaching methods for these classes and their intended goals. But we must do more than think about the future of these classes; we must also act on our thoughts and actively push the boundaries further. Thinking and then acting; that’s the spirit of *mens et manus*.

*Georgia Van de Zande is a Master's candidate in the Department for Mechanical Engineering.*



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## Steaks

Solution, page 2

	7	2	5					
6			2	3	1		9	
4				6		5		
	4	3	1					
2								3
					3	2	7	
		4		7				5
	9		6	1	4			8
					5	6	4	

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

# University

Solution, page 2

	9				8			
	3	4	1			2		6
7	1				2	9		
			9		5			7
		5				4		
4			8		1			
		7	6				4	1
3		1			4	7	5	
			5				6	

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

# Tower

Solution, page 2

240×		12×		30×	2
					2−
11+		6	20×		
	23+		2		20×
1			7+	5+	
2÷					6

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

## Airlines

Solution, page 2

1-	24x	8x	90x		1
				24x	
	6x	30x			30x
4			30x		
12x			2-		4
	15x			2x	

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

## Saturday Stumper by Brad Wilbur

Solution, page 2

## ACROSS

- 1 Plain  
9 Shelters  
15 Lofty status  
16 Iguana predator  
17 Possible punch  
    accompaniment  
18 Cry before you spill  
19 Livorno-to-Florence dir.  
20 Word from the Italian for  
    "cherish"  
22 Fairbanks, for Teddy  
    Roosevelt  
23 Lott successor as Senate  
    majority leader  
25 Part of many valentines  
27 One of the top four  
    automakers, circa 1907  
28 Morals-for-money  
32 Deceived, as a Duck  
35 Modern hospital staffer  
36 Scathing  
37 Show renewed energy  
38 Is found  
39 Sci-fi device  
41 Man-cave must-have  
42 Winner of some Olympic

## competitions

- 43 Frat letter
- 44 Much
- 45 Produce bin
- 49 \_\_-plié (ballet movement)
- 52 Title first used for shoguns
- 54 Important reign, perhaps
- 55 Targets of some fundraising campaigns
- 57 Wannabe
- 59 Hangs (on)
- 60 First female prof at the Sorbonne
- 61 Gripe
- 62 What some looks cure

**DOWN**

- 1 Rationed
- 2 Maker of the first curved-front fridge
- 3 All NFL uniforms, since 2012
- 4 Ending like -aceous
- 5 Sold for
- 6 Bathe in light
- 7 Cow
- 8 Forte \_\_ (strong-minded: Fr.)

- 9 What often tops jambalaya
- 10 Adept
- 11 Exemplar of kitschy art
- 12 45 Down rival
- 13 One of its "Welcome to"  
signs is a giant gold pan
- 14 Rung
- 21 Nonstandard
- 24 Plastic cap
- 26 Small-screen swan song  
of 2015
- 28 Initial venture
- 29 Iliad divine messenger
- 30 Coauthor of Bogart's Oscar  
role
- 31 Symbol of spring
- 32 Pizazz
- 33 Lingering trace
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## Finding strength in numbers

Two years ago, I faced one of the most difficult decisions of my life yet: where to go to college. Where would I spend my parents' savings and the next four years of my life? Like many MIT students, I was picking between top institutions. Because I knew I wanted to study computer science, I had narrowed it down to my top three: MIT, Caltech, and the University of Texas at Austin (UT) for its Turing Scholars Program. It was difficult to discern the difference academically between the top three schools, so I chose with my heart.

According to MIT's Office of Institutional Research, Black and African-American students comprise 5.6 percent of MIT's undergraduate population, compared to the 15 percent of college students nationwide, as reported by the National Center for Education Statistics in 2012.

Caltech had four black women in its entire undergraduate population of almost 1,000 and only one tenured black faculty member at the time that I applied. As I progressed through the cafeteria line on a preview day in the fall, an enthusiastic black female upperclassman saw me, navigated the sea of people, and hugged me. "I'm so glad you're considering Caltech! There are so few of us!" I tried to smile back but I could not ignore this disheartening glimpse into her life on campus.

At UT Austin, diversity is a tricky subject on a campus where more than 90 percent of students are Texas residents. Texas residents are automatically admitted if they graduate within the top seven percent of their high school class. This law increases geographical diversity within the state and is partially the reason why the university has more than 20 percent Hispanic students.

However, still only four percent of undergraduates at UT Austin identify as Black, and when I asked the director of the Turing Scholars Program for contact information of a black alumnus, I received the email of a graduate from the Class of 2001.

meet many more people who truly believed that MIT was not only the best school for me, but also the best home and community. While I don't really remember much of what happened at CPW, I will never forget my experience in the inaugural class of the Ebony Affair Fly-In Program.

The Black Students' Union (BSU) presents the Ebony Affair Gala in April every year to celebrate black excellence in the MIT community. As a high school senior participating in the fly-in program, I ate catered food, danced to what some call the "family reunion mix," and enjoyed being surrounded by smart, successful, black peers.

# Random Hall turns 12

The crowd gathered slowly. People trickled in from across campus after a long day of classes. If you looked closely, the crowd was a little unusual: hair in blues, pinks, greens, and purples; a smattering of matching shirts; and half-sheets of paper printed with script-like font reminiscent of a curious hymnal excerpt.

was choreographed chaos. “May the candles  
on your cake / Burn like cities in your wake  
/ On your birthday / Happy birthday.” The  
last two lines, included in each verse, were  
punctuated by stomping. Some lines were  
shouted, fists raised — “first you pillage, *then*  
you burn!”

baking and actual Amazon warrior women, this tradition is accompanied by a ceremonial cleaver-ing of cake.

A stylized, high-contrast illustration of a large, multi-story building, possibly a school or institutional structure. The building features a prominent 'X' on its roof, which is topped with four small, flame-like shapes. The building has multiple windows and a central entrance. It is flanked by large, dark trees and surrounded by low-lying bushes. The foreground shows a paved area with white lines, suggesting a parking lot or walkway. The overall style is graphic and minimalist, using a limited color palette of black, white, and grey.

lives of students. I crashed someone's birthday party, and even went hacking. Of the 19 prefrosh that MIT flew in for Ebony Affair, 18 of us committed to MIT.

While the students wanted to impress us with MIT, they told honest stories about how difficult MIT was, what had helped them, their regrets, and their joys. The program achieved an unprecedented yield rate of over 94 percent because it provided community without fanfare. The friends I made at Ebony Affair are the foundation of the friend group I have today. I chose to come to MIT because of my experience during the fly-in program.

Two years later, I know I made the right choice.

As an active member of the BSU and its current Attorney General, I have become ever more involved in the black community through work to reform campus policies and culture. Now, I am the one helping plan Ebony Affair with a renewed belief in the benefits of the community we have. Without this community, I would not have had the opportunity to ask advice or vent to people who understand the challenges I face.

Until recently, I did not truly understand what it meant to be a black woman in the tech industry. At MIT, almost 40 percent of Course 6 undergraduate students are women, but according to the American Society for Engineering Education, the national average is less than 15 percent. On top of that, only about two percent of the workers at large and well-known tech companies like Google, Facebook, Yahoo, and LinkedIn identify as Black. My community on campus allows me the space to vent and express my desires without the concern that my actions will represent my entire gender or race. I could not combat the prejudices, fight the glass ceilings, and be happy in my career without the support network I have built at MIT thanks to the BSU.

*Miranda McClellan is a member of the Class of 2018.*

“cruft” in east side culture.

By the time the singing was over and we were strolling back toward Random, the sun had fallen behind the new biotech buildings on Mass Ave. My boyfriend pointed out to me the inherent contrast of the birthday dirge. Dirges are typically sung at a funerals, so, at a birthday party, a dirge can only remind you of your own mortality: "Now you've aged another year / Now you know that death is near."

A typical Random Hall resident will only celebrate the dorm's birthday once in their time here, which means this is my last time celebrating Random's birthday as an undergrad. I'm only a freshman, and I'm already accumulating these little "lasts" like it's a hobby.

At the party, Cruft from 2010 was discussing her time living on Bonfire, one of Random's eight floors. It used to be a floor of video games and Internet memes. "Now they're all a bunch of hipsters," she said.

What does our time here mean if lasts follow firsts so quickly? If communities shift, if people leave?

Despite all the references to a murderous feudal society and to the inevitability of death, there was an atmosphere of unmissable joy in Lobby 7 that evening. Random Hall is a very small dorm, housing less than one hundred students, so turnout was incredible. Residents and friends, current students and cruff alike circled the entire space. Random may be a living group, but it's more than just a group of people that live together.

We have as many layers of culture as we do layers of paint on our walls. We are complex, but we are united across time and space. The investments we make in our community echo in wonderful and sometimes unpredictable ways. Incidents that took place years and years ago, such as the Clam-hole and the most random number, are now canonical stories. These stories influence us: we now question GRT candidates on whether they would help us install a manhole cover in the floor, and we hold all dorm events at 17 minutes after the hour. This is who we were and are and will continue to be.

Here's to Random's 12th birthday, and hopefully many more!

*Emma Bingham is a member of the Class of 2019.*







# From Mexico to MIT

One home to another



Bernie Cervantes

LENNY MARTINEZ—THE TECH

Bridge, from Page 7

spoke highly of forming a strong network of friends and colleagues. Getting into the groove of research made Matus feel more

at home. “I found my place when I found my own research direction, obviously with support from the lab.” Her research advisors helped her through the challenging periods.

“One of them talks to me on a personal level. I remember this phrase he told me. ‘When you come to MIT, we accept you as a rough diamond, but the beauty of MIT is that it is going to produce all these jewels, but each of them are different, and we don’t expect you to be perfect.’ For me, that was so liberating. I started to feel more and more comfortable,” said Matus.

Cervantes has made many of his friends in classes and in his lab group, and looks forward to branching out more from MIT as he gets settled. “It is no secret that good mentors and good extra-curricular activities are correlated with a happy academic career,” said Cervantes. He credits those “forces” and access to strong programs for multicultural students with his current happiness as a graduate student.

### After MIT

As Cervantes and Matus look to the future, neither of them expects to return to Mexico soon. One challenge unique to students from underserved communities is a lack of career prospects close to home. Cervantes is prepared for “home” to be far away from his parents, who still live in Tijuana, for quite some time.

“People always ask me if I would go back [to Mexico],” Cervantes said. “I always say that I would retire in Mexico, but for the rest of my career, I think I will stay here in the United States. Having a career in biotechnology is a lot easier in the U.S. than it is in Mexico,” he explained, referring to opportunities and funding in the synthetic biology field that are unavailable in Tijuana. Cervantes hopes to continue using microbes to produce chemical compounds that are helpful to people.

Matus shared this sentiment, “Nobody in my family had ever done anything related to science. In Mexico, it is already kind of rare, so no one in my family had studied science ... I didn’t know that science was a career.” She is not sure what her next steps are after graduation, and is unsure if those plans will include Mexico.

“I thought for sure that I would not go back [to Mexico], but this past year I started a few projects with people over there, and it feels good! That sensation that my work is benefitting people in my country ... it just makes me happy.” Her current work focuses on wastewater treatment and analysis of the human microbiome as part of the Center for Microbiome Informatics and Therapeutics.

Both Matus and Cervantes spoke to the

fact that although many Mexican academic institutions do not have the resources to support the research that they want to do right now, that might change in the near future. “I see the country growing in so many ways,” said Matus.

She also said that she found people in Mexico to be happier than people are here.

“Apparently we are one of the happiest countries in the world, and I can believe it,” she said. “I went home for Christmas break, and on January 6th we celebrate the *Día de los Reyes* [Day of the Three Kings]. The whole city was out, musicians on the street, people dancing, and you realize it’s amazing. There are problems with super low wages, insecurity, healthcare access, but people still take the time to celebrate, and they really mean it.”

She misses being surrounded by that kind of positivity. “That intrinsic happiness is one of the key descriptions of Mexico. I think I’ve always had that in me, but I have lost some of it from being away. People really appreciate the small things in life in Mexico. Here, the fact that my webpage took two extra seconds to load makes me want to yell. Or I get angry because I have to wait 10 minutes to text my friend be-

**‘I always say that I would retire in Mexico, but for the rest of my career, I think I will stay here in the United States. Having a career in biotechnology is a lot easier in the U.S. than it is in Mexico.’**

—Bernie Cervantes

cause my phone died.”

Matus will have to make some decisions about her future in the next few months. But first, she has to finish her PhD. She already lot of ideas about the best ways to make it through a graduate program. “It’s important to be patient. A PhD takes half a decade of your life. Everyone lives that process differently. Do your thing, be patient, and it will be fine! We’re all here for a reason, and it’s going to be great!”

*Gabi Serrato Marks is a graduate student in the Department of Earth, Atmospheric and Planetary Sciences.*

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## PORTRAITS OF RESILIENCE

# Barbara Johnson

*Editor's Note: Portraits of Resilience is a photography and narrative series by Prof. Daniel Jackson. Each installment consists of a portrait and a story, told in the subject's own words, of how they found resilience and meaning in their life.*

My hearing loss is genetic, and it runs in my family. When I was in grade school, they would bring groups of students in to the nurse's office for an annual test. We would put on these big rubber headphones, and we were supposed to raise our hand when we heard a sound. I would watch the other children and when they raised their hands, I would raise mine.

is no longer access to the information. It's kind of bittersweet.

I have a typical sensorineural hearing loss. You start losing the high frequencies first — for example, the sound of crickets on a summer evening. I remember hearing them when I was very young, and then they just dropped off. About every 10 years it would fall back a little more, a little more. I would just make do. I was strategic about how I would communicate. I relied a lot, and still rely a lot, on lip reading. I would position myself so I could see the speaker. I'm a very good guesser too, based on context. That's why accents can

other people out there that don't know either.

It is actually not an elaborate surgery at this point. They make a little incision behind your ear. They pull the skin back and then they drill a hole in your temporal bone, to get access to the cochlea. Then they insert the implant under the skin, thread in an electrode, and stitch you up. You wait for about four weeks to heal, then you go in and get the external device. The audiologist will do a 'mapping' and will set a certain program and introduce you to sound.

You have no idea how loud the world is, and it is really loud when it first gets turned on. In addition, you have to start understanding what these sounds are. Things I hadn't heard before, like everything that beeps. My microwave beeping, my dishwasher beeping, all these things that I didn't know made sounds. Riding in the car, the road noise just felt like it was torture. After a while you start to get used to it. I was walking the dog with my husband and I heard a sound. I asked him if it was a car alarm, and he said, "No, that was crickets."

The implant doesn't give you normal hearing. I think I was hoping I would use all the skills that I had acquired through the many years of my hearing loss, and then I would add onto them some new skills by virtue of the implant. That's not how it works. It's like wiping the board clean and starting over. That depressed me to some degree, so I just tried to keep going.

**I find a lot of support and power in connecting with other people who have similar challenges. The hard part is finding those people. I do talks on advocacy and education about communication access.**

I felt a bit embarrassed because I felt like people that I worked with and family members were anticipating this big change. It was a big change, but I think that they were all also a little disappointed that I still had hearing difficulties, although nobody said anything to me. It's not that anyone told me that I would have perfect hearing, but I just didn't really understand that I would still be a person with hearing loss. I just don't want to have hearing loss. I just don't.

There is a lack of understanding about hearing loss. It's just a kind of a lousy group to belong to. When I ask people at an event to use a microphone, I get resistance. I'll say, "Why don't we just have open captioning?" and sometimes I'll get, "Well, that will be distracting for everyone." You will ask for something to assist you, like remember to get my attention before you start to speak, things like that. People will forget and you have to ask again. I don't take it personally, but part of it tells you, well, you're not important. It makes you feel a little less valued.

Ofentimes, people don't think. If you don't hear them, they'll say, "Oh, it wasn't important." That's the worst thing. I know they don't realize it, but it's a message that says you're not important enough for me to repeat that.

People ask me if I'm deaf. It's hard to know what to tell people. I'm not fully able to do everything a normal hearing person can do, but I'm not really accepted in the Deaf community, since I don't have fluency in ASL. I am deaf, and I would like to be more Deaf — meaning belonging to that group.

I've said to people things like,



COURTESY OF DANIEL JACKSON

"Well, you know, I've come out as a deaf person." I was pretending I was a normal hearing person, but I really wasn't. When they told me

if enough people talk about what's a challenge, then it becomes not a big deal.

We want to make a community that's compassionate and inclusive, but how do you do that? If more of us start talking about what's going on with ourselves, with our challenges, then, in fact, we are doing something tangible, right?

Everybody has something going on. Everybody. No one is immune. I tell people, if someone tells you that they have nothing going on then they're lying. Really. Everyone has challenges, right?

Barbara Johnson is a support engineer in Information Systems and Technology.

*This project is supported by  
the Undergraduate Association's  
Committee on Student Support*

**I just keep hoping that I'm emboldening more people because if enough people talk about what's a challenge, then it becomes not a big deal.**

Now I'm learning ASL. It's very attractive to think that my effort can actually pay off and can introduce me to people who I can easily communicate with, who don't get annoyed at me because I don't hear well.

I find a lot of support and power in connecting with other people who have similar challenges. The hard part is finding those people. I do talks on advocacy and education about communication access. I just keep hoping that I'm emboldening more people because

*and Wellness, chaired by Tamar Weseley '17 and Alice Zielinski '16. To participate in the project, or to learn more, contact ResilienceProject@mit.edu.*

*There are many ways to find help. Members of the MIT community can access support resources at [together.mit.edu](http://together.mit.edu). To access support through MIT Medical's Mental Health & Counseling Service, please call (617) 253-2916 or visit [medical.mit.edu](http://medical.mit.edu).*

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# Lagarde: boosting female workforce could lift U.S. GDP

*Longer life expectancy, smaller families cause demographic shift*

Lagarde, from Page 1

conomic Well-being: The Role of Fiscal Policy,” was open to the public and hosted by the Compton Lecture Series, which was established in 1957 by MIT president Karl Taylor Compton. The series focuses on world leaders “noted for their universality of thought and their influence on human values,” as prescribed by the 1955 committee that started the series.

The talk was also part of MIT 2016, a series of events taking place from February to June that mark and commemorate the century MIT has spent at its Cambridge campus, following a move from Boston.

Lagarde approached the subject of her talk, demographic change, from first principles, explaining that life expectancies have risen dramatically over the past 50 years due to developments like the introduction of antibiotics and vaccines, and improved education.

In 1950, the average life expectancy was 47. Today, it’s 71, Lagarde said, citing estimates from the United Nations. She called this the “sunny side of demographics.”

However, better conditions mean that families are raising fewer, even if better educated, children, she said. Populations are ageing, and many developed countries are suffering from slower growth and less financial stability. Longer term, the same demographic changes are likely to appear in developing nations as well, she said.

“We must address a huge demographic challenge, so we can leave our economies and societies better than we found them,” she said.

Lagarde acknowledged there are multiple viewpoints in this

“debate about demographics” and how to approach the problem. “We need a multi-pronged approach.”

She proposed what she called “game-changers” that center on entitlement reform, improved tax systems and public expenditure, and increasing countries’ GDPs.

“Energy pricing is key,” she said, adding that countries should introduce new taxes and scale back many of their subsidies. By the IMF’s estimate, global energy subsidies — both directly and indirectly — cost \$5.3 trillion last year.

Lagarde’s talk was followed by a Q&A with President Rafael Reif and the public. When President Reif asked her about climate change, she said, “I believe that each and every one of us can do something about it.” She referred to Milan, Italy, which is currently considering paying its residents to bike to work.

Beyond her official duties, Lagarde serves as a role model for her unprecedented accomplishments as a woman in finance. Not only was she the first female to direct the IMF, but she had previously been France’s first female finance and economy minister.

“I work in a world where there are too many men and not enough women,” Lagarde said.

In her talk, Lagarde said IMF research showed that growing the female workforce could single-handedly increase the GDP of the United States by five percent.

“I think it’s critically important that we improve the parity, that we reduce the discrimination, that we give everybody a chance to accomplish what they can accomplish,” she said in the interview. “And I also believe that women can be very conducive to a better world.”

# Peer2Peer gets four chats a week, hopes volume increases

*Currently, service has 19 ‘listeners’ whom users can filter by interest*

Peer2Peer, from Page 1

tue of the devices they [support]. I think the kinds of conversations you have on mobile devices are different from those you may have on your laptop. For example, Peer2Peer’s interface allows you to select a listener based on what you are interested in talking about and has a built-in listener support chat for listeners to support one another and share advice.”

Peer2Peer users talk to dedicated “listeners” who participate in training that includes a thirty-minute virtual tutorial about MIT-specific mental health resources. There are currently 19 listeners, but Peer2Peer hopes to increase this number to around fifty by the end of the semester.

Peer2Peer originally started as an email-based service after Nightline, MIT’s crisis hotline, shut down in 2010 because the majority of callers weren’t from MIT. “Individuals from outside the community were calling in for support and volunteers were not equipped to handle the flux of non-MIT related calls,” Chilingirian said.

Two volunteers, Isabella Lubin ’12 and Tzipora Wagner ’13, formed that early version of Peer2Peer; students would email in about their lives and peers would respond within a few hours. The service provided neither anonymity nor instantaneous support, according a *Tech* article published in 2012.

Lubin and Wagner both contemplated developing an online chat network, but graduated before they could complete the project. Chilingirian read about Peer2Peer in the same *Tech* article as a freshman, and had past experience with a suicide hotline in Boston that had launched its own chat

platform, he said in an interview with *The Tech*.

By the fall of 2013, Lubin and Wagner had both graduated, and Chilingirian and Halide Bey ’15 expressed interest in working with Waldheter and Fernandes. They wanted to create an online chat service, but were unsure how to do so; when 7 Cups of Tea’s founders approached MIT Mental Health and Counseling last spring about creating an MIT-specific portal, Chilingirian realized that using 7 Cups of Tea’s already-existing technology for real-time anonymous chat was a more feasible option than creating it himself.

“We wanted to improve on Nightline and thus prioritized the service as solely available to the MIT community,” Chilingirian said, which is why users have to log on to Peer2Peer using MIT certificates.

“We know that when students are having difficulty, they first turn to peers and family members,” Waldheter said. “We wanted to increase opportunities for students to reach out to each other by normalizing health-seeking around campus.”

MIT was also very open to partnering with an external organization, Waldheter told *The Tech*. “While navigating the legal issues was a bit tricky, the administration and especially the Chancellor have been extremely supportive,” he said.

In the future, Waldheter wants to hold Peer2Peer office hours for listeners to discuss responses to crises and ways to educate users about existing mental health resources. The service is currently seeing about four chats per day, but Waldheter hopes that with time, that number will go up.

Peer2Peer’s website is can be found at [peer2peer.mit.edu](http://peer2peer.mit.edu).





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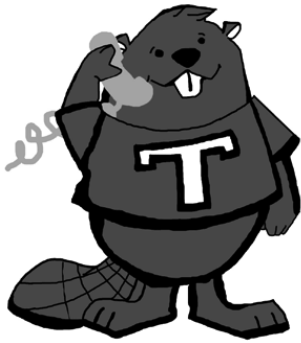
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Colombia's majestic entry in the Oscars does not let us forget the scars of Latin America's colonial past

Deep in the Amazonian rainforest, we embark on a journey with Karamakate (Nilbio Torres), a shaman who is one of the only survivors of his tribe. Colombia is being torn apart and pillaged by the rubber plantation barons who control the country during the colonial era. Director *Ciro Guerra's The Embrace of the Serpent* is an intricate and mournful examination of the ravages that this period in history wrought upon the indigenous peoples of Colombia. It is based on the travelogues of two explorers, German ethnologist Theodor Koch-Grünberg (Jan Bijvoet) and American biologist Richard Evans Schultes (Brionne Davis), who wrote some of the only existing accounts of many of these indigenous tribes.

We are presented with the bizarre quasi-mythical world of the deep Amazonian rainforest through the parallel journeys of two explorers and their guide, Karamakate, on their quest to find the sacred healing plant, *yakruna*. We first encounter Karamakate as a confident and muscular young man with anger burning in his eyes, and amidst that anger, we see a tiny glimmer of hope that he is not truly alone.

Through him, we see the nature of "civilized" man through a different lens. "Why do you whites love your things so much?" Karamakate asks scornfully as he sees both

of his travelling companions unable to part with their luggage. He remarks that we, the “civilized people,” “devour everything.” We do not *listen* to nature, and if it’s there, we take it.

One begins to wonder who the "savage" really is. When watching this immensely complex character unfurl on the screen, one realizes how far we have come in equating technological prowess with advancement and intelligence, and how wrong we are to make such assumptions.

In the second storyline, we see an old man — weary, alone, and full of regret and suppressed memories, and we realize that he, too, is Karamakate. On these two paths, we pass the same landmarks: the territory of other indigenous peoples, a rubber plantation, and a Roman Catholic mission. The changes that develop between the first and second journey reveal Guerra as a master of metaphor. The young indigenous boys at the mission first appeared to us, in Karamakate's youth, on the banks of the Amazon in white robes, almost like little angels. On the first pass through, we see the priest viciously whipping these boys. On the second pass, these boys are whipping themselves, under the crazed gaze of a self-proclaimed white "Messiah of the Indians."

This film is as visually striking as it is thematically rich — “beautiful” doesn’t cover it. The frames are works of art in their own

right. It is shot in black and white — an interesting choice given the subject matter. Many of us have grown up seeing footage of the luscious, vibrant green banks of the Amazon with a British voice outlining the immensity and diversity of this vast region. But Guerra does not want us to be fooled or distracted by appearances, by the colors, or by the beauty. He wants us to see it objectively for what it is, not what we have always imagined it to be.

The monochromatic color scheme imbues the film with a somber and foreboding tone. I can't describe the feeling, but in some scenes, I felt a visceral sort of fear build up even though the action taking place did not yet warrant it. There are images that you will not forget. You'll see the toll that cruelty, exploitation, and greed take on the innocent. You'll see it in the remaining eye of a one-armed, hobbling plantation slave, as he begs the travelers for the rapid release of death. You'll feel Karamakate's despair when he finally finds the remnants of his long-lost people, only to discover that they have coped with the wretchedness of their existence by perpetual inebriation.

To my surprise, the film does not sink under its own weight and manages to end on a vibrant note of wonder. One does not feel burdened with guilt or hopelessness; one feels that one has been enlightened.

*The Embrace of the Serpent* defies genre.

It is a song in honor of the beauty that lies in man's connection with nature — a song that is increasingly being deafened by the march of progress and “civilization” as we learn to live apart from nature. It is a prayer for us not to forget the past and a prayer for us to re-examine our relationship with this Earth and *all* people who inhabit it. Lastly, it is a majestic, sweeping symphony — a feast not only for our senses, but for our sensibilities.

★★★★★

**Directed by** **Ciro Guerra**

**Starring Jan Bijvoet,  
Brionne Davis, Antonio  
Bolivar Salvado Yangiama,  
Nilbio Torres, and Miguel  
Dionisio Ramos**

**Not Rated**

**Opens March 11 at the  
Kendall Square Cinema**

## INTERVIEW

## The Tech talks to Disney's Nick Orsi

**By Lenny Martinez**

Nick Orsi is a Visual Development Artist from Disney who spent a year working on developing Nick Wilde, the con artist fox protagonist of *Zootopia*. After a special animation presentation to the MIT community, I sat with him for a quick conversation.

**The Tech:** Earlier you mentioned you were very involved with developing Nick during the early stages of the movie. What was your favorite part of being involved with Nick?

**Orsi:** I think the first thing that really drew me to the story was the idea that this guy who, you know, came to the big city. All odds are against him and he has a lot of stereotypes against him but he has no opportunities for himself, so he's out there trying to make opportunities and he's kind of an entrepreneur. He also doesn't have anything. So I thought it was really interesting to have a character with that kind of lone wolf mentality.

**The Tech:** There's also a scene in the movie showing Nick's backstory. The one where he's a young fox and he gets bullied for being a fox. I thought that was really nice and helped make him a real character. How much of that was thought out at the beginning?

**Orsi:** There was always a scene in every version that kind of showed you what made him have that outlook and what kind of made him who he is. That was the last version of it. It had come up in one of the earlier versions and it just stuck. There was always a scene that we wanted to show the audience where he came from, and what gave him his mentality.

**The Tech:** Aside from working on Nick, which other characters did you work on?

**Orsi:** I worked on Nick, Judy, Gazelle and the dancers with the body glitter, Bogo, some crowd characters.

**The Tech:** On Bogo, the voice [of Idris Elba] really fit the animal. I'm not sure how

**that usually goes, but was that planned?**

**Orsi:** Byron [Howard, the director] did have ideas of who was going to play what. A lot of the time what we will do is throw a couple of actors up on the board to be like, "Hey, this is the feeling we're going for." Jared, the writer, and I really liked *The Wire*. We always liked Idris. The main thing was they wanted to try and pair up actors that kind of represented where the animals were from. The cape buffalo is pretty iconic in Africa. Of course we didn't always follow that formula because Shakira is a gazelle.

**The Tech:** During your presentation you mentioned being around from really early in the process. Aside from working on developing the characters, what else was really cool about the movie as it was being made?

**Orsi:** The message. That was the main thing. All Disney films are fun to work on and all Disney films look great. And I love drawing for them. I grew up in a small town

near San Francisco. And then I've lived in two cities, I've lived in San Francisco and in Los Angeles. So I know how it is when everyone's trying to live in a city together. Cities put a lot of stresses on people and everyone's very close — sometimes uncomfortably close — and there's a lot of people existing together. It takes a lot of understanding of one another, and I think the main thing that drew me to it was the message of the story and how important it was to tell. I didn't think that it would be as topical as it is.

**The Tech:** That it came out to be so relevant now? Disney started working on this movie five years ago and you joined three years ago. And now it's really relevant.

**Orsi:** Yeah. That was the really exciting thing for me. I was really excited about how relevant it is, how important it is and how large of an audience I think it will reach.

*This interview has been edited for clarity.*

## Production: We make *them* look good

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## MOVIE REVIEW

# WTF offers a unique perspective on life on the front line

Tina Fey brings a war reporter's remarkable memoir to the big screen

★★★★☆

# Whiskey Tango Foxtrot

**Directed by Glenn Ficarra  
and John Requa**

**Starring Tina Fey, Margot Robbie, and Martin Freeman**

**Rated R**

## Now Playing

**By Josh Cowsls**  
*STAFF WRITER*

*STAFF WRITER*

Reviews often destroy movies, and only rarely, as in the case of *Whiskey Tango Foxtrot*, do they create them. In 2011, a *New York Times* review of Kim Barker's wartime memoir *The Taliban Shuffle* described Barker as "a sort of Tina Fey character, who unexpectedly finds herself addicted to the adrenaline rush of war." This caught the eye of Fey herself, who began pulling strings to bring Barker's story to movie audiences as *Whiskey Tango Foxtrot*.

The transition from page to screen is largely seamless, resulting in an engrossing depiction of the personal sacrifices of reporting on a war. There is certainly some artistic license taken rendering Barker and

her experiences. Some of the changes are banal — Fey's character is subtly renamed Kim *Baker* here — but others are more substantive. In real life, Barker was a print correspondent for the *Chicago Tribune*, but on screen she appears, appropriately enough, as a TV reporter. In an interview, Barker expressed her initial fear that the movie would become "*Anchorman* in Afghanistan" as a result — yet while the TV reporter conceit does enable a scattering of visual gags, it also ratchets up the dramatic tension at several moments: Fey's Baker is unafraid to leap into the line of fire, camera in hand.

Baker's determination to chase stories builds steadily over the film, offering a compelling, non-traditional vision of battlefield bravery; viewers may detect in Fey's depiction a shade of Jessica Chastain's tenacity under pressure in *Zero Dark Thirty*. Yet by and large, in its depiction of war, *WTF* opts for banality over brutality. Life in the "Kabubble," as the western media encampment in Afghanistan's capital is known, is laid bare: there are parties, affairs, and even a broken nose or two, even as war is waged outside with gunfire and bomb blasts in earshot.

As entertaining as life in the Kabubble is made to seem, the film is at its best when it follows Baker working the beat with her Afghan minder Fahim, with whom she forms a close emotional bond. Reporting from Afghanistan as a woman is both a blessing and a curse: from behind a headscarf, Baker gets more insight into the lives of Afghan women living through the war, and she is even able to turn the unwelcome advances of a lech-



## Tina Fey plays Kim Baker in Whiskey Tango Foxtrot.

erous local politician to her professional advantage.

Fey is supported by a stellar cast: Martin Freeman is convincing as veteran Glaswegian reporter Iain MacKelpie, and Billy Bob Thornton steals scenes as an impassive general.

As a critical examination of America's involvement in Afghanistan, and how it relates to the invasion of Iraq, *Whiskey Tango*

*Fox Trot* falls short: there's little answer here to the question of what war is good for, and the impact of the conflict on ordinary Afghan life is too often rendered in soft focus and as background noise. But what the film does offer is sharp, visceral insight into the experience of reporting from the front line, and all the politics and pressures which lie behind getting a story from the frontline to the headlines.

## MOVIE REVIEW

# ***Zootopia* is humorous but drives home a hard message**

Disney's newest animated feature film is darker than expected, but still carries a ray of hope



**Nick Wilde and Judy Hopps sit in on Fru Fru's wedding dinner.**

**By Lenny Martinez**

Animated movies can be fun for adults, but they're aimed at kids. And at first, *Zootopia* feels like purely a kid's movie with a straightforward plot that we've seen before: two clashing personalities must come together to save the day. But as the plot shifts, building up to the movie's core message, you find yourself engaging with it on a level uncommon to a typical kid's movie. And that's where the magic happens.

*Zootopia* tells the story of Judy Hopps (voiced by Ginnifer Goodwin), who becomes the first rabbit cop in a police force full of fierce predator animals and moves to the central sector of the animal city Zootopia. Although at first things don't seem to be going her way, Judy is still determined to make it as a police officer and, with her job on the line, takes on the task of finding an otter who has gone missing. With few clues, Judy finds herself working together

with the con artist fox Nick Wilde (voiced by Jason Bateman). Together, they must put aside their differences and combine their strengths to find the missing animal — all before Judy loses her job!

A lot of the plot is centered around tensions between predators and prey (two naturally conflicting groups) and stereotypes. Bunnies are stereotypically cute, defenseless animals; foxes are stereotypically sneaky, selfish, and cunning. But Judy, who may be a cute bunny, also graduated at the top of her class at the police academy. And while Nick is rightfully sneaky and cunning (he is a con artist after all), he is still outsmarted by Judy. If we take out the animated characters and spectacular environment in which they live and look at the overarching message of the story, we see a movie showing that life isn't defined by stereotypes or by specific relationships that may have been true in the past. It's a movie about adapting to challenges and coming together to move toward the

same goal. And while that may sound sappy, it's very relevant today and conveyed easily through the use of animated animals.

Disney has made other movies featuring animals as the protagonists, but never one with such a diverse range of animals. Water buffalos, giraffes, lions, sheep, panthers, foxes, bunnies, shrews, sloths, elephants, and one naturalistic (read: nude) yak make up just a small part of the whole list of animals featured in the movie. With hamster office workers, a lion mayor, ice-cream shop owning elephants, and of course, the awesome sloth DMV employees, Zootopia lives up to its motto of “anyone can be anything.”

Having such a diverse cast also means having a varied environment, because clearly all these animals have different needs. Zootopia is split into different sectors (which feel a lot like the boroughs in New York City): the big-city-feeling Savanna Central, the miniature Little Rodentia, the clearly cold Tundratown, and the jungly



# Zootopia

**Directed by Byron Howard,  
Rich Moore, and Jared Bush**

**Starring Ginnifer Goodwin,  
Jason Bateman, and Idris  
Elba**

**Rated PG**

## Now Playing



# Sailing places third at prestigious race

## Engineers beat out Tufts in Final Four but fall to two other teams

**By Max Berkowitz**  
*DAPER STAFF*

The nationally-ranked No. 14 MIT sailing team finished in third place at the Sharpe Team Race Trophy over the weekend at Brown University.



In a very competitive field comprising nine programs, seven of which are ranked in the Sailing World College top 20, the Engineers compiled a record of 7-5 for third place just behind No. 18 Brown University (10-2) and Dartmouth College (9-3). MIT won the third place head-to-head tiebreaker over No. 19 Tufts University to claim the third position.

David Larson '16, Alec Stewart '17, Ty Ingram '18, and Cutter O'Connell '18 served as the skippers at the Sharpe Trophy for the Cardinal and Gray. Competing as the crew at the regatta were Lisa Sukharev-Chuyang '16, Christopher Ford '16, Jordan Ladd

'17, Kyle Joba-Woodruff '17, and Greta Farrell '18.

In the first round, the Engineers bested Brown (2-3-5), Bowdoin College (1-3-5), Dartmouth (2-3-4), Yale University (1-2-4), Rhode Island University (1-2-6), and Brown II (1-2-5). As a team, MIT compiled a record of 6-3 in the opening stage, before advancing to the Final Four.

In the Final Four, MIT came away with a win over Tufts (2-3-4), but fell to Brown (3-4-6) and Dartmouth (4-5-6) for a mark of 1-2 in the stage and an overall mark of 7-5 for the weekend.

This weekend was the fifth time since the 2009-10 season that MIT competed at the Sharpe Trophy and third time in which the Cardinal and Gray secured a third place finish among elite teams.

MIT returns to action next weekend, March 12 and 13, in the Wood Team Race hosted by Harvard University and the Tufts Invitational Team Race hosted by Tufts University.



SKYLER ADAMS—THE TECH

**Skaters from the MIT Figure Skating Club performed individually and ensemble on Saturday.**

# Manning announces his retirement, ending a successful 18-year career after Superbowl win

*The five-time NFL MVP holds the record for most touchdown passes thrown by a QB*

**Souparno Ghosh**  
*SPORTS EDITOR*

Two-time Super Bowl champion and five-time league MVP Peyton Manning announced his retirement March 7, following an 18-year career with the NFL, including 14 years with the Indianapolis Colts and four years with the Denver Broncos. Manning's decision to retire comes just a month after he guided the Denver Broncos to victory in Super Bowl 50.

The University of Tennessee alumnus has numerous NFL records to his name: most touchdown passes by a quarterback (539), most passing yards by a quarterback (71,940), most wins by a quarterback (200), five-time NFL MVP, and 14 games with over 4,000 yards passing. Remarkably,

two of his all-time records — most touchdown passes in a game (7) and most touchdown passes in a season (55) — came in 2013, two years after multiple neck surgeries curtailed his career. As this future hall-of-famer calls time on an illustrious career, we take a look back at what made Peyton Manning one of the best to ever play the game.

Peyton Manning, son of former NFL quarterback Archie Manning, played college football for the University of Tennessee and led them to the SEC Championship in his senior year. He was selected first overall in the 1998 NFL draft by the Indianapolis Colts. In his rookie year in the NFL, Manning set the inauspicious record for most interceptions by a rookie (28). However, he would only get better from then on.

Manning won the first of his five MVPs in 2003, leading the Colts to a 12-4 regular season while leading the league in passing yards. Manning followed his 2003 heroics with another MVP season in which he threw for a then-record 49 touchdown passes and finished with an incredible 121.1 passer rating. Manning led the league in passer rating again in 2005 and finished second in the MVP voting. He was named to the AP All-Pro first team for the third successive year.

While Manning was devouring all the regular season plaudits, the Lombardi trophy proved elusive. His arch-rival Tom Brady had won three in his first four years as a starter. Manning would go on to bury his post-season ghosts and win against his nemeses, the New England Patriots, in the 2006

AFC Championship Game. Down 21-3, Manning led a record comeback, including an 80-yard drive for the go-ahead touchdown to seal the Colts' entry to SB XLI. The Manning-led Colts would defeat the Bears to give No. 18 his first SB ring and SB-MVP.

Following multiple neck surgeries in 2011, Manning signed with the Denver Broncos in 2012. He led the Broncos to a top-two finish in the AFC in each of his four seasons with them. He had record-setting numbers in 2013 when he threw 55 touchdown passes that season, but his quest for a second SB trophy was thwarted by the Seattle Seahawks and the Legion of Boom. Two years later, Manning would finish his mission as he guided the Broncos to victory in SB 50. Just like general manager John Elway, Peyton Manning walked away as a Super Bowl champion.

Off the field, Manning has generally had a positive image. Yet this was tempered by allegations of sexual assault by Jamie Naughton, the director of health and wellness when Manning was the

quarterback at University of Tennessee, and suspicions that Manning used human growth hormone (hGH) when recovering from neck surgeries. On the latter point, Manning has vehemently denied using hGH, and no evidence has been found to suggest otherwise.

Peyton Manning revolutionized the way football is played. Through his unique ability to recognize defensive schemes and change plays at the line of scrimmage, Manning was able to win a number of tactical battles on the field. Manning, along with Brady, is largely responsible for ushering in the era of the quarterback and a pass-happy league.

He is perhaps the best regular-season performer of all time. As Manning himself said, at times he might not have been the most talented player on the field but he ensured he was the most prepared. He wanted to be remembered as a great teammate who genuinely loved football. Fans will miss a perfectionist who set the bar high for his peers, and of course, his famous audible, "OMAHA!"



LENNY MARTINEZ—THE TECH

**Kathryn A. Notarangelo '18** moves to keep the ball away from an incoming Endicott College player during last Wednesday's home game against Endicott College. The Engineers earned their first win of the season with a score of 19-10.

## SPORTS BLITZ

*Men's lacrosse* (2-0) defeated Skidmore College 13-7. Graham Davis '18 led the Engineers with 5 goals.

**Women's lacrosse (2-0)**  
edged Keene State College 14-12 in a high-scoring game. Cecilia McCormick '19 paced the Engineers with 4 goals.

*Men's tennis* (3-3) lost away to Bates 7-2. Sean Ko '19 and Tyler Barr '19 won their respective singles matches.

*Baseball* was shut out by UMass Boston 4-0 in the season opener. Kendall Helbert '16 broke up a no-hit bid with one down in the top of the 9th inning.

— *Souparno Ghosh*  
Sports Editor

